

IN THE CLAIMS:

Please cancel claims 1 and 5 without prejudice or disclaimer of the subject matter contained therein.

Please amend the claims as follows:

2. (Amended) An electro luminescence device comprising a p-type ZnTe substrate wherein the electro luminescence device is produced by disposing a diffusion source including an element converting the substrate of a first conduction type into the one of the second conduction type on a front surface of the substrate; forming a pn junction by heat treating and thermally diffusing the diffusion source; and forming electrodes on front and rear of the substrate, and wherein dislocation density of the substrate is not more than $20,000/\text{cm}^2$, or density of pits which are obtained by etching the substrate with sodium hydroxide aqueous solution at from 90°C to 130°C .

4. (Amended) The electro luminescence device as claimed in claim 2, wherein density of inclusions having grain diameters of $0.3\mu\text{m}$ to $10\mu\text{m}$ on an interface of the pn junction, the inclusions being able to be observed in a focal field of an optical microscope of X100 to X200 magnification, is not more than $100,000/\text{cm}^2$.

6. (Amended) The electro luminescence device as claimed in any one of claim 2 to claim 4, wherein wavelengths of light

94 emitted from both light emitting regions sandwiching an interface
95 of the pn junction are different from each other.

10. (Amended) The method for producing an electro
luminescence device as claimed in claim 8, wherein the diffusion
source disposed on the front surface of the substrate comprises
an element such that Gibbs' free energy of a compound which is
formed by combining the diffusion source and impurity is smaller
than Gibbs' free energy of a compound which is formed by
combining a constitute element in the substrate and the impurity
at a diffusion process temperature, or a material including the
element.

11. (Amended) The method for producing an electro
luminescence device as claimed in claim 8, wherein the diffusion
source is Al, Ga, In or alloy thereof.

12. (Amended) The method for producing an electro
luminescence device as claimed in claim 8, wherein the diffusion
source is Cl, Br, I, or alloy thereof.

13. (Amended) The method for producing an electro
luminescence device as claimed in claim 8, wherein the element
included in the diffusion source and gettering impurity in the
substrate has a slow diffusion rate in the substrate compared
with the element converting the substrate of the first conduction

type into one of the second conduction type.

14. (Amended) The method for producing an electro luminescence device as claimed in claim 8, wherein the impurity is at least one of O, Li, Ag, Cu and Au.

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15. (Amended) The method for producing an electro luminescence device as claimed in claim 13, wherein the element included in the diffusion source, and gettering the impurity in the substrate is at least one of B, Si and C.

16. (Amended) The method for producing an electro luminescence device as claimed in claim 8, wherein the diffusion source is deposited over the front surface of the substrate under vacuum by any one of a sputtering method, a resistance heating method, and an electron beam method.

17. (Amended) The method for producing an electro luminescence device as claimed in claim 8, wherein a heat treating temperature at the diffusion is 300°C to 700°C.

18. (Amended) The method for producing an electro luminescence device as claimed in claim 8, wherein a thickness of the diffusion source before performing the heat treatment is 1,000Å to 10,000Å, preferably, 1,500Å to 5,000Å.

20. (Amended) The method for producing an electro
luminescence device as claimed in claim 18, wherein a thickness
Q 6 of a remained diffusion source and a diffusion layer is not less
than 100Å, preferably, not less than 300Å.

21. (Amended) The method for producing an electro
luminescence device as claimed in claim 17, wherein the diffusion
source is Al or In, and the diffusion source is heat treated on a
condition that diffusion time is longer than the one specified by
a relational expression $Y= 2 \times 10^5 \exp(-0.018T)$, showing a
relation between diffusion time Y and a heat treating temperature
T.

25. (Amended) The method for producing an electro
luminescence device as claimed in claim 23, wherein the substrate
Q 7 plane having the plane orientation from which a flat plane is
able to be obtained after etching is (111)Zn plane, (001) plane, or
(011) plane.

26. (Amended) The method for producing an electro
luminescence device as claimed in claim 23, wherein the substrate
plane having the plane orientation from which a flat plane is
able to be obtained after etching has an inclining angle within 10
degrees from (111)Zn plane, (001) plane, or (011) plane.

Q 8 31. (Amended) The method for producing an electro

luminescence device as claimed in claim 29, wherein a treating temperature for the thermal diffusion is from 300°C to 550°C.

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32. (Amended) The method for producing an electro luminescence device as claimed in claim 29, wherein treatment time for the thermal diffusion is determined so as to have such a range that the diffusion source remains in not less than a predetermined thickness after the diffusion process.

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33. (Amended) The method for producing an electro luminescence device as claimed in claim 29, wherein the substrate is any one of ZnTe, ZnSe and ZnO.

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37. (Amended) The electro luminescence device as claimed in claim 35, wherein the substrate is any one of ZnTe, ZnSe and ZnO.

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41. (Amended) The electro luminescence device as claimed in claim 39, wherein the substrate is any one of ZnTe, ZnSe and ZnO.